



## CERTIFICATE OF ANALYSIS

PRODUCT CLOVE LEAF OIL  
APPEARANCE VERY DARK BROWN LIQUID  
BATCH NO: 4340603  
BEST BEFORE END: NOVEMBER 2021

ANALYSIS	RESULTS	SPECIFICATION
Refractive Index 20degC	1.532	$\geq 1.528$ $\leq 1.537$
Optical Rotation	-1.1	$\geq -1.5$ $\leq 0.0$
Specific Gravity (20c)	1.042	$\geq 1.038$ $\leq 1.054$
Eugenol	84.9	$\geq 75.0$ $\leq 85.0$



## IFRA Conformity Certificate

*Compound Name : CLOVE LEAF OIL*

We certify that the above compound is in compliance with the standards of the INTERNATIONAL FRAGRANCE ASSOCIATION (IFRA-47th amendment, published June 2013), provided it is used at a maximum concentration level of:

IFRA category (*)	Maximum level of use (%) (w/w) (**)
1A,1B (***)	0.24 (***)
2	0.24
3A	0.59
3B	0.59
3C	0.59
3D	0.59
4A	0.59
4B	0.59
4C	0.59
4D	0.59
5	0.59
6 (***)	5.06 (***)
7A	0.47
7B	0.47
8A	0.59
8B	0.59
9A	0.59
9B	0.59
9C	0.59
10A	0.59
10B	0.59
11A	100.00
11B	100.00

(\*) See annex for definition of IFRA categories

(\*\*) Usage limit N/A = Not Applicable; no IFRA restrictions

(\*\*\*) IFRA would recommend that any material used to impart perfume or flavour in products intended for human ingestion should consist of ingredients that are in compliance with appropriate regulations for foods and food flavourings

For other kinds of application or use at higher concentrations, a new safety evaluation may be needed; please contact F.D. Copeland and Sons Ltd.

The IFRA Standards regarding restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.

Evaluation of individual Fragrance ingredients is made according to the safety standards contained in the relevant section of the IFRA Code of Practice.

It is the ultimate responsibility of our customer to ensure the safety of the final product (containing this fragrance) by further testing if need be.

*The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. It is your responsibility to ensure that the usage of the fragrance ingredients and the levels of such usage are permitted at all times according to the relevant laws and regulations*

## ANNEX: Definition of IFRA categories

Finished Product Types	IFRA category
Lip products of all types (solid and liquid lipsticks, balms, clear or coloured, lipwax, etc.) Toys	1A (**)
Waxes for mechanical hair removal	1B
Deodorant and Antiperspirant Products of all types (pump spray, aerosol spray, stick, roll-on, under-arm and body, etc.) Perfumed Bracelets	2
Hydroalcoholic Products applied to recently shaved skin - EdT	3A
Hydroalcoholic Products applied to recently shaved skin- Fine fragrance	3B
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc.) including eye care Men's Facial Creams and Balms; Baby Creams, Lotions, Oils; Body Paint for Children	3C
Tampons	3D
EdT: Hydroalcoholic Products applied to unshaved skin, Ingredients of Perfume Kits, Scent Pads, Foil Packs, Scent Strips for Hydroalcoholic Products	4A
Hydroalcoholic Products applied to unshaved skin - Fine fragrance	4B
Hair styling aids sprays of all types (pumps, aerosol sprays etc.), Hair Deodorant Body Creams, Oils, Lotions, Fragrancing Creams of all types (except baby creams, lotions and oils) Fragrance Compounds for Cosmetic Kits, Foot Care Products, Body Paint for Adults	4C
Fragrancing cream	4D
Women's Facial Creams/Facial Make-up, Hand Cream, Facial Masks Hand Sanitisers, Wipes or Refreshing Tissues for Face, Neck, Hands, Body Baby Powder and Talc. Hair Permanent and Other Hair Chemical Treatments (e.g. relaxers) but not hair dyes, Dry Shampoo or Waterless Shampoo	5
Mouthwash, including Breath Sprays, Toothpaste	6 (**)
Intimate Wipes, Baby Wipes	7A
Insect Repellent (intended to be applied to the skin)	7B
Make-up Removers of all types (not including face cleansers) Hair Styling Aids Non-Spray of all types (mousse, gels, leave-in conditioners, etc.) Nail Care, Powders and talcs (not including baby powders and talcs)	8A
Hair Dyes	8B
Shampoos of all types (including baby shampoos), Conditioner (Rinse-Off), Face Cleansers of all types (washes, gels, scrubs, etc.), Liquid Soap, Bar Soap (Toilet Soap), Depilatory (not including waxes for mechanical hair removal), Shaving Creams of all types (stick, gels, foams, etc.) Body Washes of all types (including baby washes) and Shower Gels of all types Bath Gels, Foams, Mousses, Salts, Oils and other products added to bathwater	9A
Feminine Hygiene – pads, liners, Toilet Paper Wheat bags	9B
Other Aerosols (incl. air freshener sprays and air freshener pump sprays, but not deodorants / antiperspirants, hair styling aids spray and animal sprays) Facial Tissues, Napkins, Paper Towels	9C
Handwash Laundry Detergents of all types including concentrates Machine Wash Laundry Detergents (liquids, powders, tablets etc.) including laundry bleaches and concentrates Fabric Softeners of all types including fabric softener sheets, Hand Dishwashing Detergent including concentrates Hard Surface Cleaners of all types (bathroom and kitchen cleansers, furniture polish etc.) Other Household Cleaning Products (fabric cleaners, soft surface cleaners, carpet cleaners etc.) Dry Cleaning Kits, Shampoo for pets	10A
Diapers, Toilet Seat Wipes	10B
All non-skin contact including: Air Fresheners and Fragrancing of all types (concentrated aerosol air fresheners, plug-ins, solid substrate, membrane delivery, ambient, electrical...) excluding aerosol products, Liquid refills for air fresheners (cartridge systems), Scent delivery system using a dry air technology that releases a fragrance without sprays, aerosols or heated oils (technology of nebulization), Air delivery systems Candles, Joss Sticks, Incense, Air freshening crystals, Perfumed lamp ring, Scent pack, Machine Only Laundry Detergent (e.g. Iquitabs), Toilet Blocks, Insecticides (mosquito coil, paper, electrical, for clothing etc.) excluding aerosols Fuels, Paints, Floor wax, Plastic articles (excluding toys)	11A
All incidental skin contact including: Pot pourri, powders, fragrancing sachets, incense, Reed diffusers, Liquid refills for air fresheners (non-cartridge systems) Odoured Distilled Water (that can be added to steam irons), Machine Dishwash Detergent and Deodorizers Deodorizers/Maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders) Treated Textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics, tights with moisturizers) Infused socks, Scratch and sniff (sampling technology) Shoe Polishes, Cat litter, Animal Sprays (all types)	11B

(\*\*) This IFRA certificate does not include a GRAS-FEMA conformity check



## Allergen Analysis

*Compound Name : CLOVE LEAF OIL*

flavour ingredient	CAS No.	Concentration present as a percentage (%) or 'A' for absent in flavour		
		Added as such	From natural & other sources	Total
alpha-iso-Methylionone	127-51-5	A	A	A
Amyl Cinnamal	122-40-7	A	A	A
Amylcinnamyl Alcohol	101-85-9	A	A	A
Anise Alcohol	105-13-5	A	A	A
Benzyl Alcohol	100-51-6	A	A	A
Benzyl Benzoate	120-51-4	A	A	A
Benzyl Cinnamate	103-41-3	A	A	A
Benzyl Salicylate	118-58-1	A	A	A
Butylphenyl Methylpropional (Lilial)	80-54-6	A	A	A
Cinnamal	104-55-2	A	A	A
Cinnamyl Alcohol	104-54-1	A	A	A
Citral	5392-40-5	A	A	A
Citronellol	106-22-9	A	A	A
Coumarin	91-64-5	A	A	A
Eugenol	97-53-0	A	85.00	85.00
Evernia Furfuraceae (Tree Moss) Extract	90028-67-4	A	A	A
Evernia Prunastri (Oak Moss) Extract	90028-68-5	A	A	A
Famesol	4602-84-0	A	A	A
Geraniol	106-24-1	A	A	A
Hexyl Cinnamal	101-86-0	A	A	A
Hydoxycitronellal	107-75-5	A	A	A
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde (Lyrall)	31906-04-4	A	A	A
Isoeugenol	97-54-1	A	A	A
Limonene	5989-27-5	A	A	A
Linalool	78-70-6	A	A	A
Methyl 2-Octynoate	111-12-6	A	A	A

*The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. We will not therefore accept liability for misuse of this data resulting in damage or loss.*



## SAFETY DATA SHEET

### 1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND COMPANY

#### Product Identifier

Compound Name : CLOVE LEAF OIL

Code Number : RCP-78657

Relevant identified uses of the substance/mixture and uses advised against  
Concentrated flavour material for manufacturing purposes only.

#### Details of the supplier of the safety data sheet

Madar Corporation  
19-20 Sandealth Industrial Estate,  
Fordingbridge,  
Hampshire,  
SP6 1PA,  
UK  
Tel: 01425 655555  
Email: [technical@madarcorporation.co.uk](mailto:technical@madarcorporation.co.uk)

### 2. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

#### GHS Classification according to EC1272/2008

ATO 5 : Acute toxicity, oral, category 5  
AH 1 : Aspiration hazard, category 1  
ATD 5 : Acute toxicity, dermal, category 5  
SCI 3 : Skin corrosion/irritation, category 3  
SS 1 : Skin sensitisation  
EDI 2A : Eye damage/irritation, category 2A  
EH A2 : Aquatic hazard, acute, category 2

## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

EU DSD classification according to 67/548/EEC, 1999/45/EC, 2001/58/EC

### Hazard Symbols



Xn: Harmful

Risk Codes : R36,R43,R65

HydroCarbons : <= 10%

### Additional Information

Full text of R and S phrases: see Section 16

### GHS Labelling

#### Symbols



Signal Word Danger

#### Hazard Statements

H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H313	May be harmful in contact with skin
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H401	Toxic to aquatic life

#### Precautionary Statements

P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves and eye protection
P301+P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P331 Do NOT induce vomiting.

### Other Hazards

No data available at this time

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Any percentage values listed here for hazardous components are for illustrative purposes only

Description CLOVE LEAF MADAGASCAN

REACH Reg No

USCAS Number 8000-34-8

CAS Number 84961-50-2

EINECS 284-638-7

Hazardous substances in complex natural material

Chemical Name	CAS No. EC No.	Classification 67/548/EEC	Classification EC 1272/2008	Conc (%)
Eugenol	97-53-0 202-589-1	Xn; R36,R43	ATO 5(2300); SCI 3; EDI 2A; SS 1B; EH A2	85.0000
Caryophyllene	87-44-5 201-746-1	Xn; R65	AH 1; SCI 3	10.0000
Eugenyl acetate	93-28-7 202-235-6	Xn; R22	ATO 4(1670); SCI 3	0.3000

### 4. FIRST AID MEASURES

General : Take phrases in sections 2 and 15 into account

Inhalation : Remove from the exposure area to fresh air. Contact a doctor if necessary.

Ingestion : Wash mouth with plenty of water and obtain medical advice immediately.

Skin Contact : Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical advice if irritation persists or there is any sign of tissue damage.

Eye Contact : Flush with plenty of water and seek medical advice if necessary.



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

### 5. FIRE-FIGHTING MEASURES

Extinguishing Media	: Carbon dioxide, foam or dry powder DO NOT USE A DIRECT WATER JET. In case of overheating, cool containers to avoid a pressure increase.
Combustion Products	: Carbon dioxide and unidentified organic compounds.
Special Protective Equipment for Fire Fighters Only	: Wear protective clothing and avoid inhalation of vapours.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.  
Avoid inhalation, skin and eye contact.  
Ensure proper ventilation.

Environmental precautions

Do not discharge directly into drains or the soil. Keep away from surface and ground water

Methods and material for containment and cleaning up

Soak up spillage with sand or other inert absorbant material such as earth or vermiculite; transfer used material to a suitable waste container and dispose in accordance with regulations.

Reference to other sections

Take Risk, Safety and Precautionary phrases (section 16) into account





## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Maintain good occupational and personal hygiene. Avoid inhalation and contact with skin and eyes.

#### Conditions for safe storage, including any incompatibilities

Store in tightly sealed original containers away from ignition sources and in a cool place.

#### Specific end use(s)

Not available at this time

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Control Parameters

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#### Exposure Controls

Maintain adequate ventilation.

#### Personal Protection

Respiratory Protection : Not generally required. (Use inhalation protection in poorly ventilated areas)

Hand Protection : Wear chemically resistant disposable gloves.

Eye Protection : Wear safety goggles.

Skin Protection : Wear overalls. Always wash routinely before breaks, meals and at the end of the work period.



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Flash Point (°C)	: >65
Colour	: VERY DARK BROWN
Aroma	: DRY, WOODY
Solubility	: INSOLUBLE

### 10. STABILITY AND REACTIVITY

Conditions to avoid	: Extreme temperatures
Incompatible materials	: Highly reactive chemicals which may produce unknown reaction products and so cause additional hazards.
Hazardous decomposition products	: Not determined

### 11. TOXICOLOGY INFORMATION

Not available for a complex mixture of different substances.

### 12. ECOLOGICAL INFORMATION

Not available; avoid soil, surface water and water-bearing stratum contamination.

### 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with the law and local regulations. Treat as trade effluent.



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

### 14. TRANSPORT INFORMATION

UN Number : Not Regulated  
Shipping Name :  
Class :  
Packing Group :  
Tunnel Code :

### 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

No relevant information available at this time

Chemical safety assessment

No data available at this time

Contains Eugenol which may produce an allergic reaction

### 16. OTHER INFORMATION

Text of the risk and safety phrases listed in section 2

R36	Irritating to eyes
R43	May cause sensitisation by skin contact
R65	Harmful: may cause lung damage if swallowed
S24	Avoid contact with skin
S37	Wear suitable gloves
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves and eye protection



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

P301+P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.

Text of the risk phrases listed in section 3

R22	Harmful if swallowed
R36	Irritating to eyes
R43	May cause sensitisation by skin contact
R65	Harmful: may cause lung damage if swallowed



## PRODUCT SPECIFICATION

Product Name : CLOVE LEAF OIL  
Reference : RCP-78657  
Flash Point deg C : >65  
Aroma / Taste : DRY, WOODY  
Appearance / Physical State : VERY DARK BROWN LIQUID  
Composition : ESSENTIAL OIL

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Refractive Index 20degC >= 1.528 <= 1.537

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Optical Rotation >= -1.5 <= 0.0

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Specific Gravity (20c) >= 1.038 <= 1.054

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Eugenol >= 75.0 <= 85.0

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Shelf Life : 12 Months  
(if stored in full airtight containers, protected  
from heat and direct sunlight)